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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,167	06/27/2003	John B. Hageman	DP-308578 7500/244	7809

7590 10/28/2004

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Troy, MI 48007

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,167

Applicant(s)

HAGEMAN ET AL.

Examiner

Christopher P. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/16/2004
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment filed 8/19/2004 has been received and considered. No amendment to the claims has been made.

Claim Rejections - 35 USC § 112

2. Claims 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In light of applicant's remarks with respect to invoking 35 U.S.C. 112 sixth paragraph it is unclear what "means for conducting heat from the actuator motor means along the thermal conduit" applicant intends to claim. Looking to the specification at page 5 (see line 17) over to page 6 it appears several "means" may be invoked. Note line 17 states "at least one thermal conduit 90 is provided for dissipating heat energy away from the actuator motor 70". This statement would lead one to believe that the thermal conduit itself may be interpreted as the "means", which becomes problematic because it has already been claimed. Further applicants recite properties of the thermal conduit such as the materials from which it is made, greater thermal conductivity, the thermal conduit including one or more apertures, the attachment of the thermal conduit 90 to the caliper 34 and routed to a dissipation site.

Applicants do not specify in their remarks what "means" is being invoked under 35 U.S.C. 112 sixth paragraph, let alone specifically describe it in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,3,5,7-10,13-16,18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Deane et al..

Regarding claims 1,10,16, subject to the 112 above and as best understood, Deane et al. discloses a brake assembly comprising a rotor (inherent in the reference) a brake caliper 10 including a hydraulic “actuator motor”, at least one friction pad and at least one thermal conduit 16 functioning as claimed which extends into coolant lines 52,53. Note also coolant line 23.

Regarding claim 3, as broadly claimed, these requirements are met. See figure 1.

Regarding claims 5,7 as broadly claimed, these requirements are met.

Regarding claim 8 see the top of column 3 line 2.

Regarding claims 9,13,14,18,19 Deane et al. uses a radiator as the heatsink member. Radiators have “fins” or vanes. Note the fan in figure 1.

Regarding claims 15,20 as broadly claimed, these requirements are met.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2,6,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deane et al..

Regarding claims 2,11 although Deane et al. is silent as to the relative thermal conductivities of the conduit and caliper it would have been obvious to the ordinary skilled worker in the art at the time of the invention to have made the conduit of Deane et al. from a material having a higher thermal conductivity than that of the caliper simply

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to offer better dissipation of thermal energy away from the brake components. Note that Deane et al. discusses using different materials in column 1 around line 40.

Regarding claim 6 simply to have attached the thermal conduit of Deane et al. to a "suspension component" would have been obvious to the ordinary skilled worker in the art at the time the invention was made to keep it clear from possible damage or simply as a necessary attachment point.

8. Claims 4, 12, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deane et al. in view of Maeda.

Regarding claims 4, 12, 17 to have made the thermal conduit 16, 23 of Deane et al. from a flexible material such as steel reinforced rubber-like hose, as taught by Maeda, would have been obvious to the ordinary skilled worker in the art to more easily adapt the brake system to different vehicles in that the conduit could be manipulated, or "movably flexed" more easily. See Maeda figure 13 and column 17.

Response to Arguments

Applicant's arguments filed 8/19/2004 have been fully considered but they are not persuasive. It is unclear from applicant's remarks exactly what claimed elements distinguish the independent claims from the reference to Deane et al.

Applicant's briefly describe the Deane references, that the system of Deane requires a pump and that "in contrast a thermal conduit is not connected to a pump". Applicant's then point to the specification at page 5 lines 25-26 but it is unclear where these limitations are found in the claims. Applicant's then state "... the structure claimed

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can not be construed as reading on the Deane disclosure. It is unclear what structure applicants are referring to.

The rejection above addresses all of applicant's claimed limitations.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

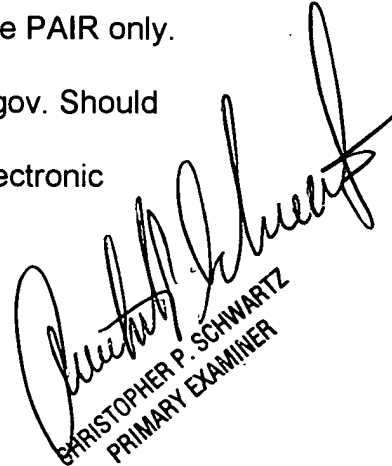
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
10/26/04



CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER